

25X1 CLASSIFICATION CONFIDENTIAL  
 CENTRAL INTELLIGENCE AGENCY

25X1 [REDACTED]

25X1 COUNTRY USSR  
 SUBJECT Economic; Technological - Agricultural  
 HOW machine building  
 PUBLISHED industry Daily newspapers DATE DIST. 1 APR 1953  
 WHERE USSR NO. OF PAGES 3  
 PUBLISHED  
 DATE 16 Nov 1952 - 16 Jan 1953  
 LANGUAGE Russian SUPPLEMENT TO  
 REPORT NO.

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USSR TEA CULTIVATING, PICKING MACHINES;  
INEFFICIENCY AT MINISTRY, PLANT LEVEL

TRACES WORK OF GEORGIAN SSR DESIGN BUREAU -- Tbilisi, Zarya Vostoka,  
 26 Nov 52

Three years ago, the Georgian SSR State Special Design Bureau of the Ministry of Agricultural Machine Building USSR was established in Tbilisi to develop machines that would mechanize the cultivation of subtropical and industrial crops.

The bureau has developed machines for tea picking, pruning, and fumigating. All these machines are tractor mounted; hence, they are lighter, require half as much metal to build, and are more maneuverable than trailer machines.

The design bureau has developed the first successful tea-picking machine in the world. All previous machines, such as the one built by the "Tarpen" [transliterated] firm in London in 1948, cut all the leaves instead of picking selectively, hence, they were unsuccessful.

Of the 3,000-4,000 leaves on a square meter surface of tea bush, only 300 to 400 are suitable for picking. Moreover, the leaf must be broken off at a given point and conveyed to a hopper without mechanical damage. The picking machine designed by the bureau satisfies these conditions, and 1953 will go down as the year in which machine picking of tea leave really began.

Our bureau is constantly guided by the TsK KP of Georgia. The Union government fully approved the measures outlined by the TsK KP and the Council of Ministers of Georgia for introducing new technology in tea growing and in mountain agriculture. The Ministry of Agricultural Machine Building USSR has been given the task of supplying the Ministry of Agriculture USSR with machines designed by our bureau for the Georgian SSR.

- 1 -

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At present, our bureau has been reorganized and expanded into the State Special Design Bureau of Machines for Subtropical Crops and Mountain Agriculture. -- Sh. Ya. Kereselidze, chief of the Georgian SSR State Special Design Bureau.

MACHINES FOR SUBTROPICAL AGRICULTURE -- Tbilisi, Zarya Vostoka, 26 Nov 52

In 1953, 25 tea-picking machines will be put in operation in Georgia. Each of these machines, which were designed by Sh. Ya. Kereselidze, replaces 30 workers picking tea by hand.

The ChUG-1.6 universal self-propelled tea-pruning machine prunes up to 3 hectares of tea bushes daily, can operate on slopes up to 30 degrees, and has a turning radius of 2.5 meters. This three-wheeled machine also deposits fertilizer and cultivates the bushes, and with the addition of a picking apparatus, can be used as a tea picker. In 1952, 20 of these machines were first used on Georgia tea plantations, and in 1953, 300 more ChUG-1.6 universal tea pruners will be built.

The ChSM-1.2 universal flatland self-propelled machine developed by Laboratory No 3 of the State Special Design Bureau is used for pruning, cultivating, depositing fertilizer, and fumigating tea bushes on land with slopes up to 10 degrees. It prunes one hectare of tea bushes in one fourth to one third of a workday. The ChSM-1.2 has passed state tests and has been recommended for series production. The Ministry of Agricultural Machine Building will build 50 of these machines for the coming pruning season.

The GS-1.5 universal hill and flatland self-propelled pruning machine, designed by Laboratory No 1 of the State Special Design Bureau is used for pruning tea bushes, depositing fertilizer, and also as a tractor on flatlands and on slopes up to 30 degrees. Tea picking and fumigating apparatus can be attached to the machine. The GS-1.5 can prune up to 8 hectares of tea bushes daily. The machine has passed state tests and has been recommended for series production. In 1953, subtropical regions of Georgia will receive the first 100 GS-1.5 universal pruning machines.

At present, tea bushes are fumigated by hand with hydrogen cyanide, and it requires 6 man-days to fumigate one hectare, since tents must be set up over the plants. A new generator-type machine designed with the aid of the Institute of Plant Protection, Academy of Sciences Georgian SSR and operated by three men can fumigate up to 3 hectares daily and reduces the amount of tent cloth required.

The PVK-1.8 cultivator plow designed by Laboratory No 2 of the State Special Design Bureau is used for between-row cultivation of vines. In 1953, the first 500 PVK-1.8 cultivator plows will be produced; 300 will be tractor-mounted and 200 will be trailer plows. The bureau has also developed the POG-1 and POG-2 horse-drawn swivel plows for hilly land. Five hundred of these plows will be built in 1953.

Laboratory No 4 of the State Special Design Bureau has designed the KU-1 and KU-6 grading machines for sorting citrus fruits ranging in size from lemons to grapefruit. The KU-1, for field use, sorts 5,400 pieces of fruit an hour; the KU-6, for packaging-plant use, sorts 32,400 pieces of fruit an hour. In 1953, 100 of these machines will be built.

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LACK TRACTOR ACCESSORIES, IMPLEMENTS -- Moscow, Izvestiya, 19 Dec 52

The Ministry of Agricultural Machine Building does not produce enough couplers to meet the needs of USSR agriculture, and the S-11 and S-18 couplers it does produce are cumbersome and antiquated.

Instruments for indicating the load on engines should be standard equipment on all tractors. Heavy agricultural machines, especially combines, should be equipped with pneumatic tires for increased efficiency and lower fuel consumption. New tractors should be tested all year, not just during the farming season.

Tractor-mounted implements are more efficient and lighter than trailer implements. The KPN-3 tractor-mounted cultivator is 200 kilograms lighter than the KP-3 trailer cultivator, and a tractor-mounted sugarbeet lifter is 335 kilograms lighter than a trailer sugarbeet lifter. VNIKhOM (All-Union Scientific Research Institute of Agricultural Machine Building) and agricultural machine building plants have not shown sufficient initiative in developing tractor-mounted implements. Thus, only three tractor-mounted implements have been developed for the new Belarus tractor, and two of these require considerable improvement.

CRITICIZE STALINO PLANT -- Moscow, Pravda, 8 Dec 52

The 19th Party Congress criticized the Stalino Agricultural Machine Building Plant for turning out defective products and for spasmodic production. The plant turned over twice as many finished machines to the Ministry of Agriculture on 30 November as it did in the first 10-day period of the month, and half of these machines proved to be defective.

BUILD BUSH AND BOG PLOW -- Ashkhabad, Turkmeneskaya Iskra, 16 Nov 52

The Odessa Agriculture Machine Building Plant imeni Oktyabr'skaya Revoliutsiya has begun the series production of new bush and bog tractor plows for the reclamation of swamp land.

PRODUCES HARROWS -- Minsk, Sovetskaya Belorussiya, 27 Dec 52

The Polotsk Foundry and Machinery Plant has organized the output of zig-zag harrows. The first consignment totaled 4,000 harrows.

BUILD GRANULATORS -- Moscow, Izvestiya, 16 Jan 52

The Kamensk-Ural'skiy Electrical Machinery Plant is producing granulators for processing organic and mineral fertilizers.

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- 3 -

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